Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

ERS—638

CALIFORNIA-ARIZONA FRESH ORANGES: MARKETING PATTERNS, PRICES, COSTS, MARGINS, AND GROWER RETURNS

REPRINTED FROM THE FRUIT SITUATION ● JUNE 1976

ECONOMIC RESEARCH SERVICE U.S. DEPARTMENT OF AGRICULTURE

CALIFORNIA-ARIZONA FRESH ORANGES: MARKETING PATTERNS, PRICES, COSTS, MARGINS, AND GROWER RETURNS

by
Alfred J. Burns and Joseph C. Podany
Agricultural Economists
Commodity Economics Division
Economic Research Service

ABSTRACT: About one-fifth of the 1974/75 U.S. orange crop was used fresh. California and Arizona supplied two-thirds of the U.S. fresh crop that season. This report discusses trends in production and consumption of all oranges; marketing patterns for fresh California-Arizona oranges; and prices, costs, margins, and grower returns for fresh California-Arizona navel and Valencia oranges sold in New York City.

KEYWORDS: Oranges, California-Arizona, production, consumption, marketing, prices, margins, grower returns.

U.S. per capita consumption of fresh oranges, after declining steadily since the introduction of frozen concentrated orange juice in the early 1940's, has leveled off since 1961 and averaged between 14 and 16 pounds in 13 of the last 15 years. Consumption of frozen concentrated orange juice per person continued to increase rapidly during this period, reaching a record high of 28.1 pounds (single strength) in 1975.

Commercial orange production is reported in only four States—Florida, California, Arizona, and Texas. Florida is by far the largest producer, accounting for 75-80 percent of the U.S. crop each season in the last decade. Orange production in Florida increased sharply during this period, reaching a record high 7.8 million tons in 1974/75 (table 1). However, an increasingly large share of Florida's orange crop was processed each season. Fresh use represented only 7 percent of Florida's 1974/75 crop; down from 16 percent in 1965/66.

California, the No. 2 orange producing State, utilized more oranges fresh than Florida in each season except 1967/68. California produces only about 15-20 percent of the U.S. orange crop, but 60-70 percent of California's crop is used fresh. Arizona produces about 2 percent of the U.S. orange crop each season. More than half of Arizona's orange are used fresh. California and Arizona fresh oranges, marketed collectively under two Federal marketing orders, represented over 60 percent of the U.S. orange crop used fresh in recent seasons.

Although production and fresh use of California-Arizona navel and Valencia oranges fluctuated widely from season to season during 1965/66-1974/75, orange production trended upward during the period with Valencia production increasing most (table 2). The quantity of California-Arizona navel oranges used fresh also trended upward while Valencia oranges used fresh did not show any significant trend during the 10 seasons. Three-fourths or more of the navel orange crop was used fresh in most seasons while about 50-60 percent of the Valencia orange crop was used fresh.

Marketing Patterns

California-Arizona fresh orange unloads were fairly evenly distributed among U.S. regions, with the exception of the South.[1] One-third of the 1972-

[1] Based on unload data from the Agricultural Marketing Service (AMS) for calendar 1962 through 1974. These data identify the source of monthly rail and truck unloads in 41 major U.S. cities. Carlots were converted to tons using AMS conversion factors to allow for different carlot weights during the period.

Table 1—Oranges: Production and fresh use, selected States and United States, 1965/66-1974/75

Season	Production				Fresh use			
	Florida	California	Arizona	United States	Florida	California	Arizona	United States
	1,000 tons	*1,000 tons*	*1,000 tons*	*1,000 tons*	*1,000 tons*	*1,000 tons*	*1,000 tons*	*1,000 tons*
1965/66	4,316	1,346	89	5,808	692	946	61	1,750
1966/67	6,278	1,380	144	7,924	804	1,005	86	1,978
1967/68	4,522	718	114	5,436	769	440	93	1,369
1968/69	5,836	1,661	197	7,898	599	989	124	1,809
1969/70	6,196	1,462	174	8,023	597	994	90	1,790
1970/71	6,404	1,406	134	8,223	628	965	49	1,784
1971/72	6,165	1,628	184	8,237	505	1,028	76	1,726
1972/73	7,636	1,579	190	9,737	550	904	108	1,698
1973/74	7,461	1,515	128	9,386	499	1,099	79	1,778
1974/75	7,798	2,066	186	10,245	603	1,335	111	2,151

Table 2—Oranges, California-Arizona: Production and fresh use, by variety, 1965/66-1974/75

Season	Navel and miscellaneous		Valencia	
	Production	Fresh use	Production	Fresh use
	*1,000 cartons**	*1,000 cartons**	*1,000 cartons**	*1,000 cartons**
1965/66	38,420	29,828	38,120	23,902
1966/67	35,650	30,514	45,650	27,648
1967/68	19,900	12,632	24,480	15,800
1968/69	39,500	30,358	59,620	28,972
1969/70	44,380	33,458	42,880	24,364
1970/71	37,320	30,548	44,800	23,530
1971/72	46,400	34,476	50,200	24,428
1972/73	39,520	26,448	54,800	27,490
1973/74	44,700	35,498	42,920	27,296
1974/75	57,840	42,000	62,300	35,100

*37.5 pounds net weight per carton.

74 rail and truck unloads were in western cities, with Los Angeles alone taking 16 percent (figure 1). The Midwest absorbed nearly one-third of the unloads with Chicago, Minneapolis, and Detroit accounting for most of the midwestern unloads. The East received 28 percent, with 11 percent in New York City. Only 5 percent were unloaded in the South, reflecting strong competition from Florida oranges.

U.S. unloads of California-Arizona fresh oranges in 1972-74 were almost one-third more than in 1962-64 (figure 2). Gains were made in all regions except the East. The Midwest experienced the largest gain (62 percent) and advanced from third to second most important region for California-Arizona oranges. The West, with a 50-percent increase, moved from second to first in importance. In contrast, eastern unloads declined about 4 percent and the region fell from first to third in importance.

Trucks are playing an increasingly important role in moving California-Arizona oranges to market. About three-fifths of the 41 city unloads arrived by truck in 1972-74, up from two-fifths in 1962-64 (figure 3). The proportion of truck use rose in each region, with the largest increase occurring in the Midwest.

As expected, the importance of truck use in shipping California-Arizona oranges decreased with the distance from the production area. Virtually all western unloads arrived by truck in 1972-74, compared with less than a tenth to such major eastern markets as Boston, Buffalo, New York City, Philadelphia, and Providence. The heavy use of trucks in shipping to the South probably results from a lack of adequate rail facilities or adequate rail service.

Figure 4 shows monthly orange unloads in New York City for 1972-74 by place of origin. Essentially all New York City orange supplies are from Florida or California-Arizona. Florida orange supplies are particularly heavy during the winter and spring, drop sharply in the summer, and increase again in late fall with the beginning of a new season. California-Arizona orange supplies are more evenly distributed throughout the year, with slightly heavier supplies during the navel orange season—December through May.

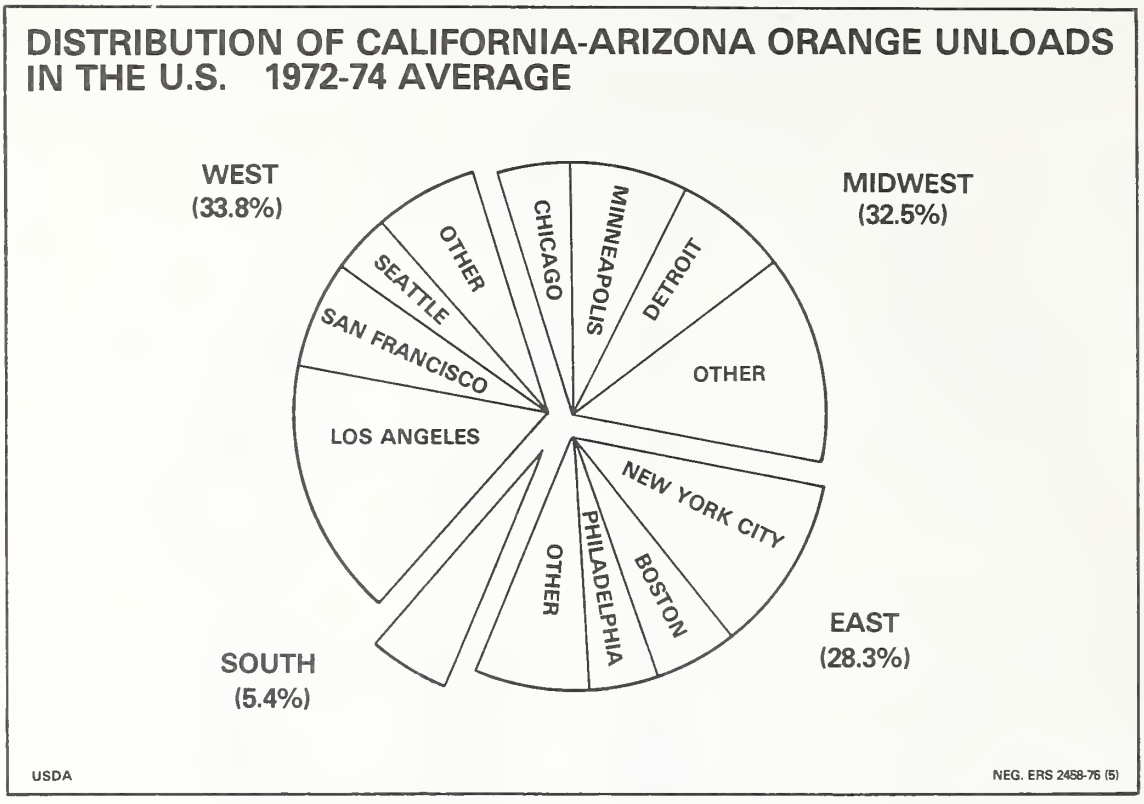

Figure 1

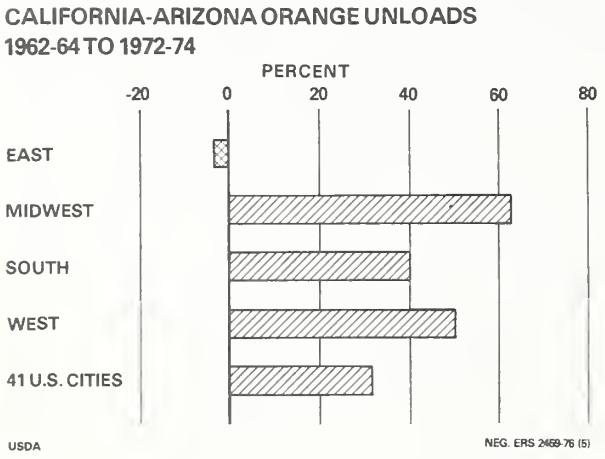

Figure 2

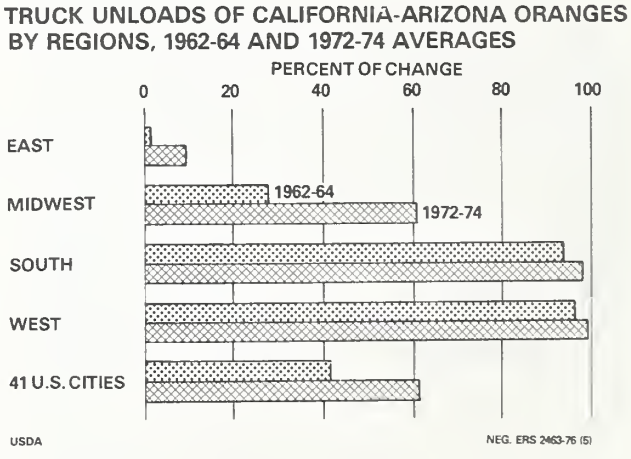

Figure 3

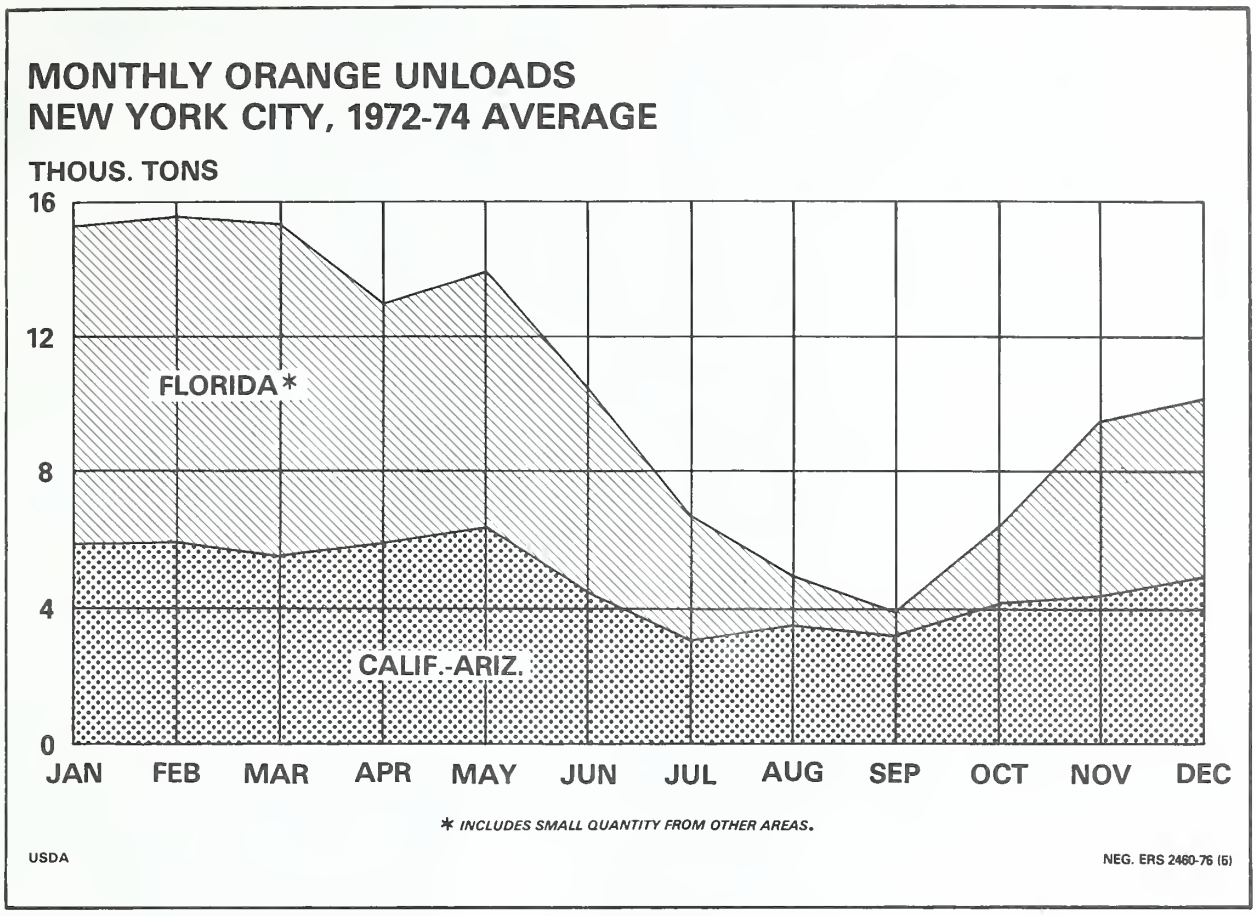

Figure 4

Prices and Margins

Data used in this section are taken from a continuing ERS study of fruit and vegetable costs and margins. In this study, California navel and Valencia oranges are priced at two levels—California shipping points and retail in New York City. Retail prices are collected monthly by the Bureau of Labor Statistics in a sample of retail stores on Tuesday, Wednesday, and Thursday during the first week of the month containing a Tuesday. The shipping point price used is an average of daily prices for the week preceding the retail pricing week. Weekly average shipping point prices are reported by the Navel and Valencia Orange Administrative Committees. Monthly retail and shipping point prices are weighted by monthly carlot unloads of California-Arizona oranges in New York City to obtain the average price for the season. Seasons used are December through May for navel oranges and May through November for Valencia oranges.

The retail value of a carton of California-Arizona oranges is the return to the retailer for salable oranges (retail price minus 3 percent allowance for spoilage lost during the marketing process). Transportation costs are based on rail rates from Santa Paula, California, to New York City. Grower returns are derived from shipping point price by deducting the picking, hauling, packing, and selling costs published by the Statistical Reporting Service. The wholesale and retail margin is derived by deducting the shipping point price plus transportation costs from the retail value. This margin represents payment for wholesaling (assembly and warehousing), intra-city transportation, and retailing. These functions may be performed by one or more firms.

Navel Oranges

The season average retail price of California-Arizona navel oranges in New York City was 30 cents a pound in 1974/75, about 10 cents a pound higher than in 1965/66 (table 3). Retail price fluctuated some during the period, but on the average increased about 1 cent per pound per season.

Table 3—California-Arizona Navel oranges: Seasonal average prices, margins, costs and returns, New York City, 1965/66-1974/75[1]

Season	Retail price per pound	Retail value per carton[2]	Wholesale and retail margin		Transportation costs[3]		Picking, hauling, packing and selling costs[4]		Derived grower returns[5]	
			Per carton	Percentage of retail value	Per carton	Percentage of retail value	Per carton	Percentage of retail value	Per carton	Percentage of retail value
	Cents	*Dollars*	*Dollars*	*Percent*	*Dollars*	*Percent*	*Dollars*	*Percent*	*Dollars*	*Percent*
1965/66	20.3	7.38	3.81	51	.95	13	1.17	16	1.45	20
1966/67	20.2	7.35	3.72	51	.95	13	1.20	16	1.48	20
1967/68	26.8	9.75	4.26	44	.97	10	1.45	15	3.07	31
1968/69	23.2	8.44	4.55	54	1.00	12	1.43	17	1.46	17
1969/70	23.6	8.58	4.72	55	1.06	12	1.39	16	1.41	17
1970/71	25.5	9.27	4.72	51	1.19	13	1.60	17	1.76	19
1971/72	25.9	9.42	5.03	53	1.22	13	1.61	17	1.56	17
1972/73	29.3	10.66	5.74	54	1.21	11	1.47	14	2.24	21
1973/74	27.2	9.89	4.97	50	1.35	14	1.75	18	1.82	18
1974/75	30.0	10.91	5.65	52	1.54	14	1.85	17	1.87	17

[1] 6-month weighted average (Dec.-May) for all sizes of oranges, 37.5 pounds net weight per carton. [2] Returns to retailer for salable oranges (3-percent allowance for loss incurred during marketing). [3] Rail charges from Santa Paula, California. [4] Derived from season average F.O.B. packed price minus equivalent on-tree price reported by SRS. [5] Derived by deducting picking, hauling, packing, and selling costs from shipping point price.

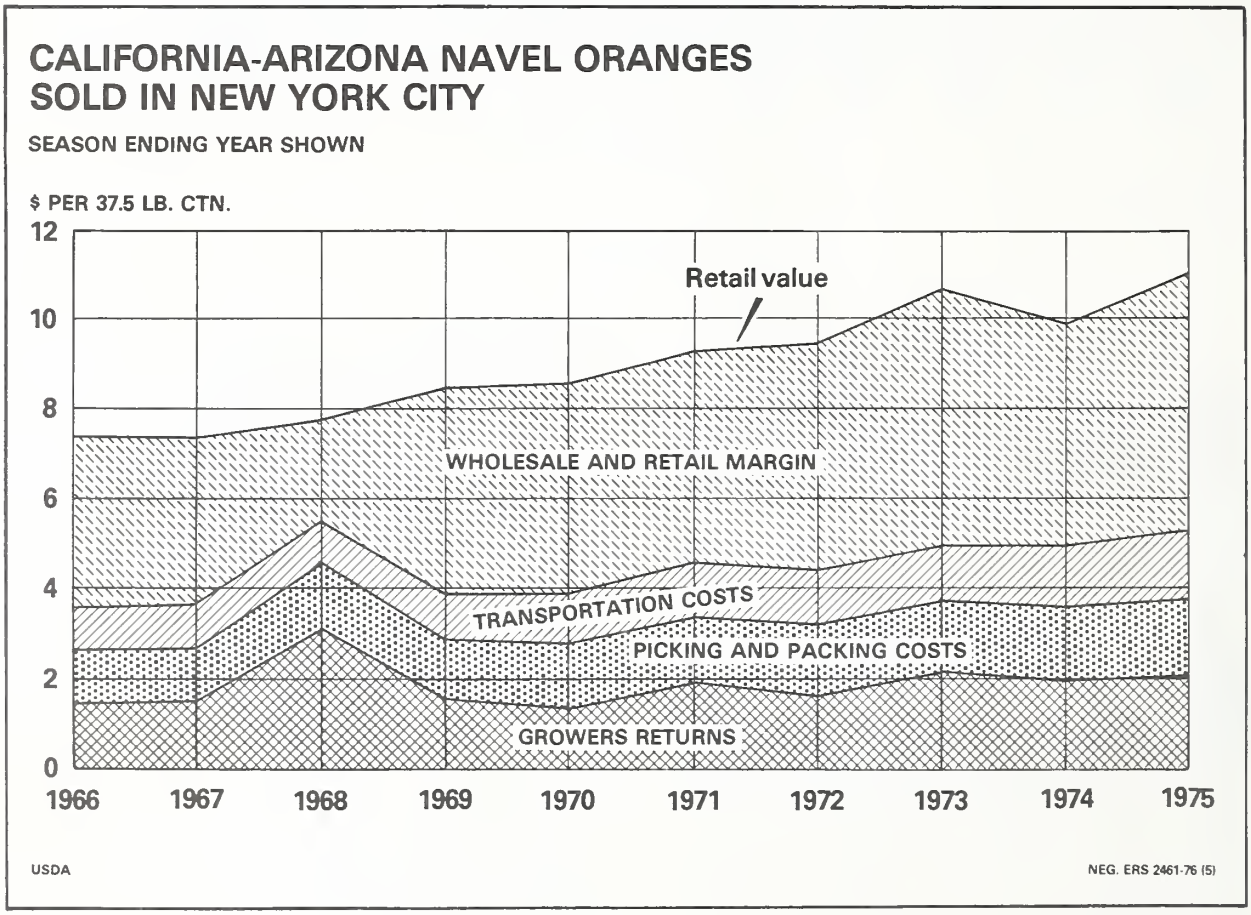

Figure 5

The retail value of a 37.5 pound carton of California-Arizona navel oranges averaged $10.91 in 1974/75, about 48 percent higher than nine seasons earlier (figure 5). The wholesale and retail margin rose from $3.81 per carton in 1965/66 to $5.65 in 1974/75, a 48-percent rise. Transportation costs jumped sharply in the last two seasons to $1.54 per carton in 1974/75, 62 percent above 1965/66. Picking, hauling, packing, and selling costs increased from $1.19 to $1.85 a 58-percent rise. Grower returns trended upward during the period, but were highly variable and fluctuated from season to season.

A simple trend line fitted to the data in table 3 indicates that the retail value of California-Arizona oranges sold in New York City increased an average of 35 cents per carton per season since 1965/66. During the 10 seasons the wholesale and retail margin increased 21 cents per carton per season on the average; rail transportation costs rose 6 cents; picking, hauling, packing, and selling costs went up 6 cents; and grower returns went up 2 cents.

The market shares, or percentage of the retail value going to growers and other market factors, fluctuated from season to season, but did not show any significant trend. For the 10 seasons, the wholesale and retail margin averaged 52 percent of the retail value; transportation costs, 12 percent; picking, hauling, packing and selling costs, 16 percent; and grower returns, 20 percent.

Valencia Oranges

The season average retail price of California-Arizona Valencia oranges in New York City was 28.2 cents a pound in 1975, 6.7 cents more than in 1966 (table 4). Like navel oranges, retail prices of Valencia oranges fluctuated from season to season. On the average, the retail price of Valencia oranges increased about three-fourths of a cent per pound per season for the period.

The retail value of a 37.5 pound carton of California-Arizona Valencia oranges averaged $10.26 in 1975, nearly one-third higher than in 1965 (figure 6). The wholesale and retail margin also increased nearly one-third to $5.10 in 1975. Transportation costs increased sharply, particularly in the last two seasons. Grower returns fluctuated from season to season, but changed little over the 10 seasons.

A simple trend analysis indicated that the retail value of California-Arizona Valencia oranges sold in New York City increased an average of 26 cents per carton per season during 1966-75. During that period grower returns dropped an average of 1 cent per carton per season; picking, hauling, packing and selling costs went up 7 cents; transportation costs rose 7 cents; and the wholesale and retail margin went up 13 cents.

The market shares, or percentage of the retail value going to the grower and other market factors, fluctuated from season to season, but did not

Table 4—California-Arizona Valencia oranges: Seasonal average prices, margins, costs and returns, New York City, 1966-75[1]

Season	Retail price per pound	Retail value per carton[2]	Wholesale and retail margin		Transportation costs[3]		Picking, hauling, packing and selling costs[4]		Derived grower returns[5]	
			Per carton	Percentage of retail value	Per carton	Percentage of retail value	Per carton	Percentage of retail value	Per carton	Percentage of retail value
	Cents	*Dollars*	*Dollars*	*Percent*	*Dollars*	*Percent*	*Dollars*	*Percent*	*Dollars*	*Percent*
1966	21.5	7.81	3.87	50	.95	12	1.17	15	1.82	23
1967	19.9	7.26	3.72	51	.96	13	1.20	17	1.38	19
1968	25.8	9.39	4.30	46	.98	11	1.44	15	2.67	28
1969	21.2	7.71	4.15	54	1.00	13	1.42	18	1.14	15
1970	23.4	8.52	4.49	53	1.09	13	1.35	16	1.59	18
1971	23.7	8.62	4.24	49	1.21	14	1.56	18	1.61	19
1972	25.1	9.13	4.94	54	1.23	13	1.61	18	1.35	15
1973	26.1	9.50	4.77	50	1.23	13	1.54	16	1.96	21
1974	26.7	9.71	4.58	47	1.47	15	1.85	19	1.81	19
1975	28.2	10.26	5.10	50	1.66	16	1.92	19	1.58	15

[1] 7-month weighted average (May-Dec.) for all sizes of oranges, 37.5 pounds net weight per carton. [2] Returns to retailer for salable oranges (3-percent allowance for loss incurred during marketing). [3] Rail charges from Santa Paula, California. [4] Derived from season average F.O.B. packed price minus equivalent on-tree price reported by SRS. [5] Derived by deducting picking, hauling, packing, and selling costs from shipping point price.

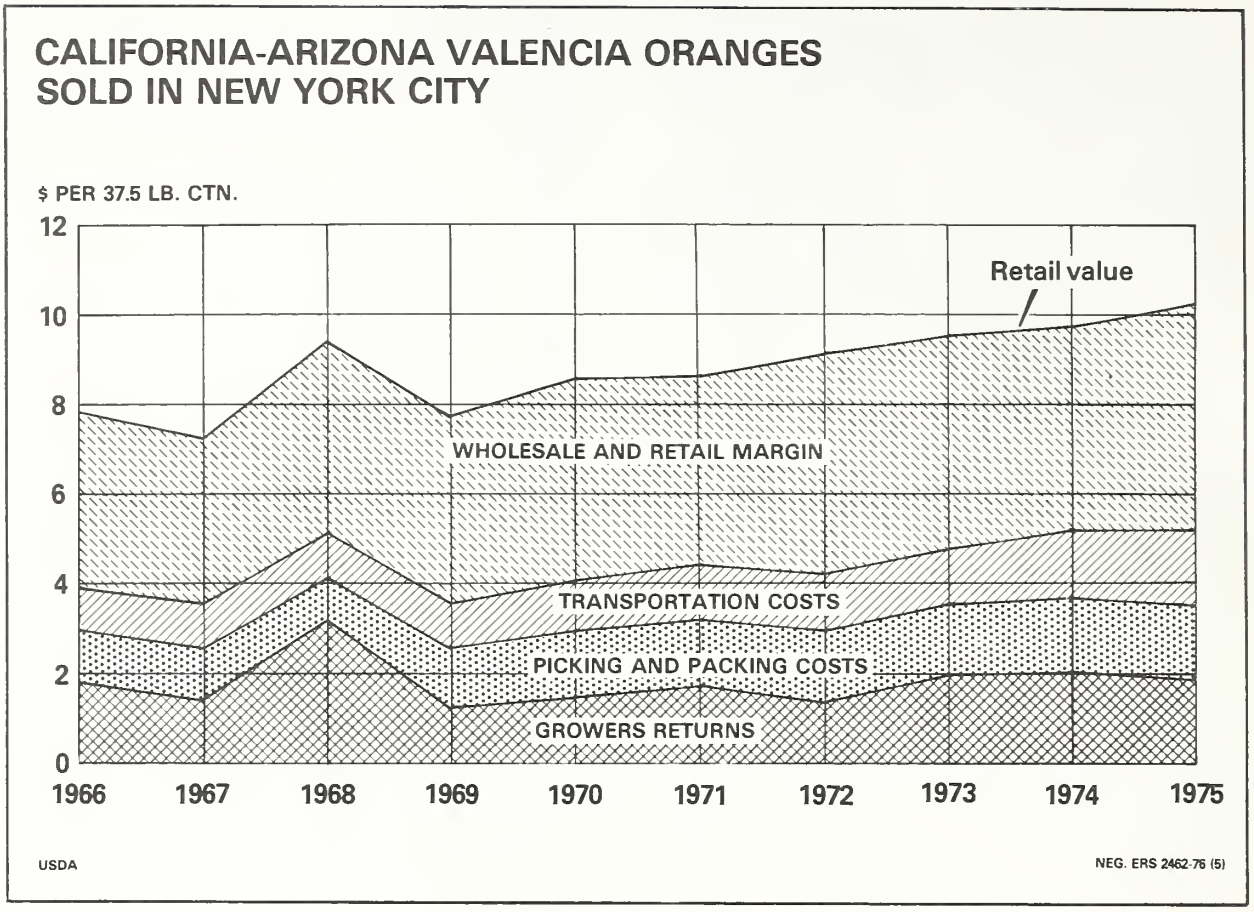

Figure 6

show any significant trend over the period. For the 10 seasons, the wholesale and retail margin averaged 51 percent of the retail value; transportation costs, 13 percent; picking, hauling, packing and selling costs, 17 percent; and grower returns, 19 percent.